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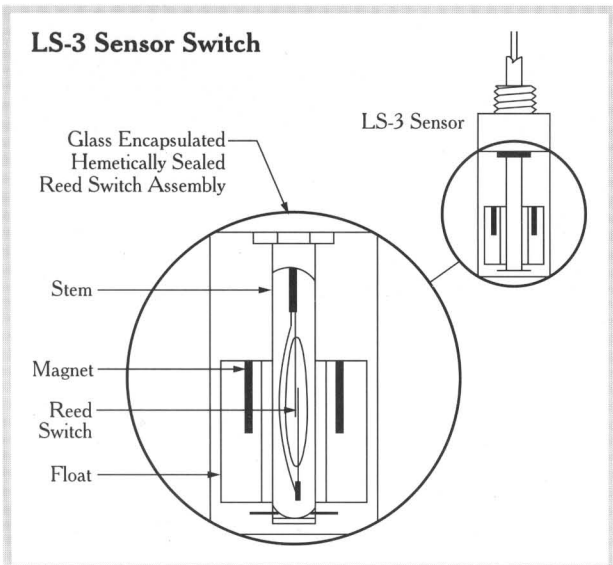
Vertical Liquid Sensors Models LS-3/-3s/-3ss

Ronan's Model LS-3 Vertical Liquid Sensor and the variations LS-3s and LS-3ss are designed to detect changes in liquid level within reservoirs or the intrusion of liquid in dry containment zones and caisson compartments where vertical positioning of the sensor is allowed. The LS-3 is constructed of 304 and 316 stainless steel, polysulfone, Buna-N and PVC. The LS-3s includes an integral Pull-to-Test cable, required in some jurisdictions. The LS-3ss Sensor is constructed of 304 and 316 stainless steel and Teflon, and is designed for use in chemical applications where corrosion is a concern. All LS-3 sensors are designed to provide years of trouble-free service.

All LS-3 sensors have user selectable logic and may be installed in wet or dry conditions. Liquid collection or loss, sufficient to move the float will transmit a signal to the control panel to initiate control functions or annunciate alarms. The LS-3's design allows rigid or flexible mounting to allow easy periodic testing as required by many regulatory agencies. The sensor may be mounted loosely suspended by its cable or rigid with the 1/2 inch NPT nipple.

Typical Applications

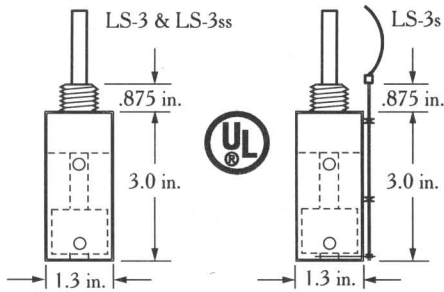
- DW Steel Tank Interstice Monitoring
- Piping Containment Sumps
- Sub-pump Containment Sumps
- Fill Riser Containment Sump
- High Level/Overflow Monitoring
- Vertical Application Point Level Sensing
- Where Ground Level Testing is Required
- Corrosive Chemical Monitoring



Dependable, Simple Operation

Ronan's LS-3 Sensors operate on a direct principle. A glass encapsulated hermetically sealed reed switch is embedded within the sensor stem. Permanent magnets within the sensors float create a magnetic field which surrounds the reed switch holding the switch closed. When the magnetic field is removed by movement of the float, the reed switch is actuated, thereby changing the state. This condition either opens a closed switch or closes an open switch. This change in state is then signaled to the control panel.

Dimensions (± 0.05)



Specifications

Specifications are subject to change without notice. Contact Ronan Engineering to verify critical specifications.

Wetted Parts: 304 and 316 Stainless Steel, Buna-N, Polysulfone, PVC, Teflon

Mounting: 1/2 inch NPT, male

Switch Rating: SPST, 20VA, 120-240 Vac pilot duty

Operating Temperature: -40°F to +180°F (LS-3 & LS-3s)
-40°F to +300°F (LS-3ss)

Float S.G.: 0.55 (LS-3 & -3S), 0.77 (LS-3ss)

Pressure: 150 psi maximum (LS-3 & LS-3s)
400 psi maximum (LS-3ss)

Cable: PVC or Teflon jacket, twisted pair, 20AWG, 22 ft

Options

LS-3s: Includes integral Pull-to-Test cable, required in some jurisdictions

LS-3ss: Stainless steel version for chemical applications. Supplied with 316 SS float and stem

LS-1: Typical LS-3 with 1 inch O.D. for restricted clearances

Ordering Information

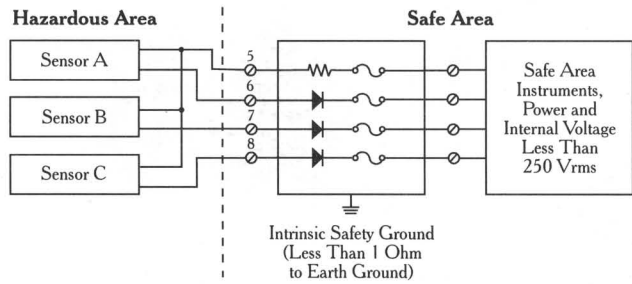
Part No.	Description
LS-3	Standard Vertical Liquid Sensor with normally open contacts
LS-3NO*	Standard Vertical Liquid Sensor, with normally closed contacts
LS-3s	Vertical Liquid Sensor, with Pull-to-Test cable
LS-3sNO*	Vertical Liquid Sensor, with Pull-to-Test cable and normally open contacts
LS-3ss**	Chemical compatible Vertical Liquid Sensor
LS-3ssNO*	Chemical compatible Vertical Liquid Sensor with normally open contacts
LS-1	1.0 inch O.D. Vertical Liquid Sensor
LS-1NO*	1.0 inch O.D. Vertical Liquid Sensor with normally open contacts

* Unless specified otherwise, LS-3 sensors ship with NC contacts.

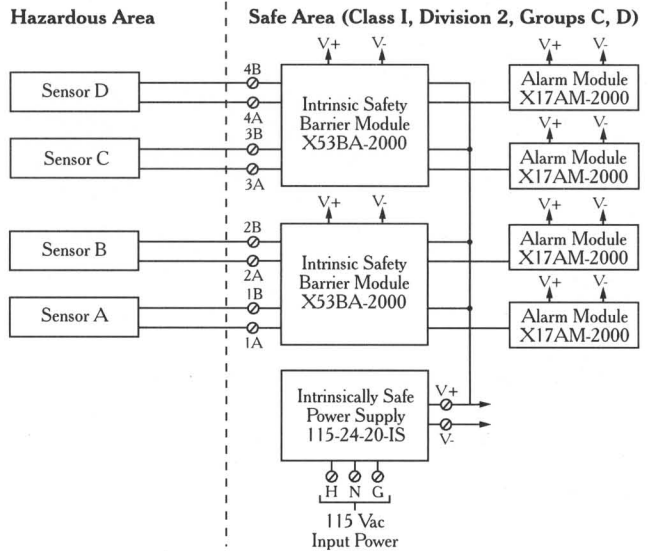
** Consult factory for chemical compatibility and specific gravity requirements.

Typical Wiring Diagrams

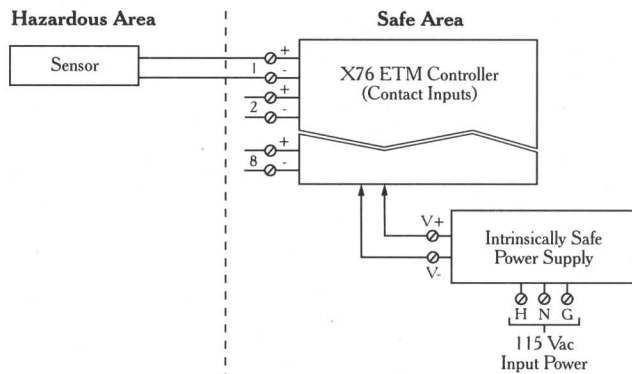
X76LVC, X76LVCS, X76-4X & X76AST-4X Systems



X76S System



X76ETM-4X & X76ETM Systems



For additional information, catalogs and pricing, contact your local Ronan distributor or call 800-32-ROANAN.



Ronan Engineering Company
Leak Detection Measurements Division
21200 Oxnard Street, Woodland Hills, California 91367
818.883-5211 FAX: 818.992.6435
<http://www.ronan.com> E-mail: info@ronan.com

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